

Attorney Docket No.: FMCE-P115

In the Claims:

1 (currently amended): A conveying apparatus for conveying a material which comprises:

an elongated conveying bed which includes a proximal end and a distal end;

a support structure for the conveying bed which accommodates vibratory motion of a portion of the conveying bed extending from the proximal end a substantial distance toward the distal end, but which dampens vibratory motion at the distal end; and

a piezoelectric driver which is operatively connected to the conveying bed adjacent the proximal end;

wherein operation of the piezoelectric driver induces a wave motion in the conveying bed which conveys the material from the proximal end to the distal end; and

wherein the support structure comprises at least one isolation spring which is positioned between the proximal end and a static base structure and a rigid support member which is positioned between the distal end and the base structure.

2 (canceled).

3 (original): The conveying apparatus of claim 2, further comprising a static conveying trough which includes a pair of side walls that are positioned adjacent opposite sides of the conveying bed.

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4 (original): The conveying apparatus of claim 3, wherein the static conveying trough is supported proximate the distal end of the conveying bed by the rigid support member.

5 (original): The conveying apparatus of claim 4, wherein the static conveying trough is further supported by at least one static support member which is spaced apart from the rigid support member.

6 (currently amended): The conveying apparatus of claim [[1]] 2, wherein the conveying bed comprises a generally flat plate.

7 (original): The conveying apparatus of claim 6, wherein the plate comprises a thickness of at least about 18 gauge.

8 (currently amended): ~~The conveying apparatus of claim 1,~~ A conveying apparatus for conveying a material which comprises:

an elongated conveying bed which includes a proximal end and a distal end;

a support structure for the conveying bed which accommodates vibratory motion of a portion of the conveying bed extending from the proximal end a substantial distance toward the distal end, but which dampens vibratory motion at the distal end; and

a piezoelectric driver which is operatively connected to the conveying bed adjacent the proximal end;

wherein operation of the piezoelectric driver induces a wave motion in the conveying bed which conveys the material from the proximal end to the distal end; and

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wherein the piezoelectric driver is operable at a frequency of between about 0 and 20 kilohertz.

9 (original): The conveying apparatus of claim 8, wherein the piezoelectric driver is operable at an amplitude of between about 0 and 0.002 inch.

10 (currently amended): ~~The conveying apparatus of claim 1, A~~
conveying apparatus for conveying a material which comprises:

an elongated conveying bed which includes a proximal end and a distal end;

a support structure for the conveying bed which accommodates vibratory motion of a portion of the conveying bed extending from the proximal end a substantial distance toward the distal end, but which dampens vibratory motion at the distal end; and

a piezoelectric driver which is operatively connected to the conveying bed adjacent the proximal end;

wherein operation of the piezoelectric driver induces a wave motion in the conveying bed which conveys the material from the proximal end to the distal end; and

wherein the piezoelectric driver is operable at approximately the natural frequency of the conveying bed.

11 (currently amended): A method for conveying a material which comprises the steps of:

providing an elongated conveying bed which includes a proximal end and a distal end;

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supporting the conveying bed on a support structure which comprises at least one isolation spring that is positioned between the proximal end and a static base structure and a rigid support member that is positioned between the distal end and the base structure;

~~supporting the conveying bed such that~~ wherein vibratory motion is accommodated in a portion of the conveying bed extending from the proximal end a substantial distance toward the distal end but dampened at the distal end; and

inducing vibratory motion in the proximal end of the conveying bed with a piezoelectric driver;

wherein the vibratory motion generates a wave motion in the conveying bed that conveys the material from the proximal end to the distal end.

12 (original): The method of claim 11, wherein the piezoelectric driver is operated at a frequency of between about 0 and 20 kilohertz.

13 (original): The method of claim 12, wherein the piezoelectric driver is operated at an amplitude of between about 0 and 0.002 inch.

14 (original): The method of claim 11, wherein the piezoelectric driver is operated at approximately the natural frequency of the conveying bed.

15 (original): The method of claim 11, further comprising the step of confining the material on the conveying bed with a static conveying trough which includes a pair of side walls that are positioned adjacent opposite sides of the conveying bed.